



OIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/978,600

DATE: 01/28/2002  
TIME: 11:29:11

Input Set : N:\Crf3\RULE60\09978600.raw  
Output Set: N:\CRF3\01282002\I978600.raw

## SEQUENCE LISTING

## 1 (1) GENERAL INFORMATION:

2 (i) APPLICANT: HERRNSTADT, CORINNA  
3 PARKER, WILLIAM D.  
4 DAVIS, ROBERT  
5 MILLER, SCOTT W.

6 (ii) TITLE OF INVENTION: Diagnosis, Therapy and Cellular and  
7 Animal Models for Diseases Associated With  
8 Mitochondrial  
9 Defects

10 (iii) NUMBER OF SEQUENCES: 206

11 (iv) CORRESPONDENCE ADDRESS:

12 (A) ADDRESSEE: Kenyon & Kenyon  
13 (B) STREET: 1025 Connecticut Avenue, N.W.  
14 (C) CITY: Washington  
15 (D) STATE: DC  
16 (E) COUNTRY: USA  
17 (F) ZIP: 20036-5405

18 (v) COMPUTER READABLE FORM:

19 (A) MEDIUM TYPE: Floppy disk  
20 (B) COMPUTER: IBM PC compatible  
21 (C) OPERATING SYSTEM: PC-DOS/MS-DOS  
22 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

23 (vi) CURRENT APPLICATION DATA:

C--> 24 (A) APPLICATION NUMBER: US/09/978,600  
C--> 25 (B) FILING DATE: 15-Oct-2001  
26 (C) CLASSIFICATION:

27 (vii) PRIOR APPLICATION DATA:

29 (A) APPLICATION NUMBER: US/09/448,312  
30 (B) FILING DATE: 23-Nov-1999  
31 (A) APPLICATION NUMBER: 08/413,740  
32 (B) FILING DATE:  
33 (A) APPLICATION NUMBER: PCT/US95/04063  
34 (B) FILING DATE: 30-MAR-1995  
35 (A) APPLICATION NUMBER: 08/413,740  
36 (B) FILING DATE: 30-MAR-1995

37 (viii) ATTORNEY/AGENT INFORMATION:

38 (A) NAME: Bonham, David B.  
39 (B) REGISTRATION NUMBER: 34297  
40 (C) REFERENCE/DOCKET NUMBER: 2105/7

41 (ix) TELECOMMUNICATION INFORMATION:

42 (A) TELEPHONE: (202) 429-1776  
43 (B) TELEFAX: (202) 429-0796

ENTERED

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/978,600

DATE: 01/28/2002

TIME: 11:29:11

Input Set : N:\Crf3\RULE60\09978600.raw

Output Set: N:\CRF3\01282002\I978600.raw

## 44 (2) INFORMATION FOR SEQ ID NO: 1:

## 45 (i) SEQUENCE CHARACTERISTICS:

46 (A) LENGTH: 1735 base pairs

47 (B) TYPE: nucleic acid

48 (C) STRANDEDNESS: double

49 (D) TOPOLOGY: linear

50 (ii) MOLECULE TYPE: other nucleic acid

51 (iii) HYPOTHETICAL: NO

52 (iv) ANTI-SENSE: NO

53 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

```

54 AGAGGCCTAA CCCCTGTCTT TAGATTTTAC AGTCCAATGC TTCACTCAGC CATTTTACCT      60
55 CACCCCACT GATGTTTCGCC GACCGTTGAC TATTCTCTAC AAACCACAAA GACATTGGAA      120
56 CACTATACCT ATTATTCGGC GCATGAGCTG GAGTCCTAGG CACAGCTCTA AGCCTCCTTA      180
57 TTCGAGCCGA GCTGGGCCAG CCAGGCAACC TTCTAGGTAA CGACCACATC TACAACGTTA      240
58 TCGTCACAGC CCATGCATTT GTAATAATCT TCTCATAGT AATACCCATC ATAATCGGAG      300
59 GCTTTGGCAA CTGACTAGTT CCCCTAATAA TCGGTGCCCC CGATATGGCG TTTCCCCGCA      360
60 TAAACAACAT AAGCTTCTGA CTCTTACCTC CCTCTCTCCT ACTCCTGCTC GCATCTGCTA      420
61 TAGTGGAGGC CGGAGCAGGA ACAGGTTGAA CAGTCTACCC TCCCTTAGCA GGGAACTACT      480
62 CCCACCCTGG AGCCTCCGTA GACCTAACCA TCTTCTCCTT ACACCTAGCA GGTGTCTCCT      540
63 CTATCTTAGG GGCCATCAAT TTCATCACAA CAATTATCAA TATAAAACCC CCTGCCATAA      600
64 CCCAATACCA AACGCCCTC TTCGTCTGAT CCGTCCTAAT CACAGCAGTC CTACTTCTCC      660
65 TATCTCTCCC AGTCCTAGCT GCTGGCATCA CTATACTACT AACAGACCGC AACCTCAACA      720
66 CCACCTTCTT CGACCCCGCC GGAGGAGGAG ACCCATTCT ATACCAACAC CTATTCTGAT      780
67 TTTTCGGTCA CCCTGAAGTT TATATTCTTA TCCTACCAGG CTTCGGAATA ATCTCCATA      840
68 TTGTAACCTA CTAATCCGGA AAAAAAGAAC CATTTGGATA CATAGGTATG GTCTGAGCTA      900
69 TGATATCAAT TGGATTCTTA GGGTTTATCG TGTGAGCACA CCATATATTT ACAGTAGGAA      960
70 TAGACGTAGA CACACGAGCA TATTTCACCT CCGCTACCAT AATCATCGCT ATCCCCACCG      1020
71 GCGTCAAAGT ATTTAGCTGA CTCGCCACAC TCCACGGAAG CAATATGAAA TGATCTGCTG      1080
72 CAGTGCTCTG AGCCCTAGGA TTCATCCTTT TCACCGTAGG TGGCCTGACT GGCATTGTAT      1140
73 TAGCAAATC ATCACTAGAC ATCGTACTAC ACGACACGTA CTACGTTGTA GCCCACTTCC      1200
74 ACTATGTCCT ATCAATAGGA GCTGTATTTG CCATCATAGG AGGCTTCATT CACTGATTTT      1260
75 CCCTATTCTC AGGCTACACC CTAGACCAAA CCTACGCCAA AATCCATTTC ACTATCATAT      1320
76 TCATCGGCGT AAATCTAACT TTCTTCCCAC AACACTTTCT CGGCCTATCC GGAATGCCCC      1380
77 GACGTTACTC GGACTACCCC GATGCATACA CCACATGAAA CATCCTATCA TCTGTAGGCT      1440
78 CATTCAATTC TCTAACAGCA GTAATATTAA TAATTTTCAT GATTGAGAA GCCTTCGCTT      1500
79 CGAAGCGAAA AGTCCTAATA GTAGAAGAAC CCTCCATAAA CCTGGAGTGA CTATATGGAT      1560
80 GCCCCCACC CTACCACACA TTCGAAGAAC CCGTATACAT AAAATCTAGA CAAAAAAGGA      1620
81 AGGAATCGAA CCCCCAAAG CTGGTTTCAA GCCAACCCCA TGGCCTCCAT GACTTTTTCA      1680
82 AAAAGGTATT AGAAAAACCA TTTCATAACT TTGTCAAAGT TAAATTATAG GCTAA      1735

```

## 84 (2) INFORMATION FOR SEQ ID NO: 2:

## 85 (i) SEQUENCE CHARACTERISTICS:

86 (A) LENGTH: 854 base pairs

87 (B) TYPE: nucleic acid

88 (C) STRANDEDNESS: double

89 (D) TOPOLOGY: linear

90 (ii) MOLECULE TYPE: other nucleic acid

91 (iii) HYPOTHETICAL: NO

92 (iv) ANTI-SENSE: NO

93 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/978,600

DATE: 01/28/2002

TIME: 11:29:11

Input Set : N:\Crf3\RULE60\09978600.raw

Output Set: N:\CRF3\01282002\I978600.raw

```

94      AGGTATTAGA AAAACCATTT CATAACTTTG TCGTCAAAGT TAAATTATAG GCTAAATCCT      60
95      ATATATCTTA ATGGCACATG CAGCGCAAGT AGGTCTACAA GACGCTACTT CCCCTATCAT      120
96      AGAAGAGCTT ATCACCTTTC ATGATCACGC CCTCATAATC ATTTTCCTTA TCTGCTTCCT      180
97      AGTCCTGTAT GCCCTTTTCC TAACACTCAC AACAAAATA ACTAATACTA ACATCTCAGA      240
98      CGCTCAGGAA ATAGAAACCG TCTGAACTAT CCTGCCCCGC ATCATCCTAG TCCTCATCGC      300
99      CCTCCCATCC CTACGCATCC TTTACATAAC AGACGAGGTC AACGATCCCT CCCTTACCAT      360
100     CAAATCAATT GGCCACCAAT GGTACTGAAC CTACGAGTAC ACCGACTACG GCGGACTAAT      420
101     CTTCAACTCC TACATACTTC CCCCATTATT CCTAGAACCA GGCGACCTGC GACTCCTTGA      480
102     CGTTGACAAT CGAGTAGTAC TCCCGATTGA AGCCCCATT CGTATAATAA TTACATCACA      540
103     AGACCTCTTG CACTCATGAG CTGTCCCAC ATTAGGCTTA AAAACAGATG CAATTCCTCGG      600
104     ACGTCTAAAC CAAACCACTT TCACCGCTAC ACGACCGGGG GTATACTACG GTCAATGCTC      660
105     TGAAATCTGT GGAGCAAACC ACAGTTTCAT GCCCATCGTC CTAGAATTAA TTCCCCTAAA      720
106     AATCTTTGAA ATAGGGCCCC TATTTACCTT ATAGCACCCC CTCTACCCCC TCTAGAGCCC      780
107     ACTGTAAAGC TAACCTAGCA TTAACCTTTT AAGTTAAAGA TTAAGAGAAC CAACACCTGT      840
108     TTACAGTGAA ATGC                                         854

110 (2) INFORMATION FOR SEQ ID NO: 3:
111     (i) SEQUENCE CHARACTERISTICS:
112         (A) LENGTH: 954 base pairs
113         (B) TYPE: nucleic acid
114         (C) STRANDEDNESS: double
115         (D) TOPOLOGY: linear
116     (ii) MOLECULE TYPE: other nucleic acid
117     (iii) HYPOTHETICAL: NO
118     (iv) ANTI-SENSE: NO
119     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
120     TCGCTGTGCG CTTAATCCAA GCCTACGTTT TCACACTTCT AGTAAGCCTC TACCTGCACG      60
121     ACAACACATA ATGACCCACC AATCACATGC CTATCATATA GTAAACCCA GCCCATGACC      120
122     CCTAACAGGG GCCCTCTCAG CCCTCCTAAG TACCTCCGGC CTAGCCATGT GATTTCACTT      180
123     CCACTCCATA ACGCTCCTCA TACTAGGCCT ACTAACCAAC ACACTAACCA TATACCAATG      240
124     ATGGCGCGAT GTAACACGAG AAAGCACATA CCAAGGCCAC CACACACCAC CTGTCCAAAA      300
125     AGGCCTTCGA TACGGGATAA TCCTATTTAT TACCTCAGAA GTTTTTTTCT TCGCAGGATT      360
126     TTTCTGAGCC TTTTACCACT CCAGCCTAGC CCCTACCCCC CAATTAGGAG GGCCTGGCC      420
127     CCGAACAGGC ATCACCCCGC TAAATCCCCT AGAAGTCCCA CTCCTAAACA CATCCGTATT      480
128     ACTCGCATCA GGAGTATCAA TCACCTGAGC TCACCATAGT CTAATAGAAA ACAACCGAAA      540
129     CCAAATAATT CAAGCACTGC TTATTACAAT TTTACTGGGT CTCTATTTA CCCTCCTACA      600
130     GCCTCAGAGT ACTTCGAGTC TCCCTTCACC ATTTCCGACG GCATCTACGG CTCAACATTT      660
131     TTTGTAGCCA CAGGCTTCCA CGGACTTCAC GTCATTATTG GCTCAACTTT CCTCACTATC      720
132     TGCTTCATCC GCCAACTAAT ATTTCACTTT ACATCCAAAC ATCACTTTGG CTTCGAAGCC      780
133     GCCGCCTGAT ACTGGCATTG TGTAGATGTG GTTTGACTAT TTCTGTATGT CTCCATCTAT      840
134     GATGAGGGTC TTACTCTTTT AGTATAAATA GTACCGTTAA CTTCCAATTA ACTAGTTTTG      900
135     ACAACATTCA AAAAAGAGTA ATAACTTCG CTTATCAAC ACCCAATTTT AATA      954

137 (2) INFORMATION FOR SEQ ID NO: 4:
138     (i) SEQUENCE CHARACTERISTICS:
139         (A) LENGTH: 23 base pairs
140         (B) TYPE: nucleic acid
141         (C) STRANDEDNESS: double
142         (D) TOPOLOGY: linear
143     (ii) MOLECULE TYPE: other nucleic acid
144     (iii) HYPOTHETICAL: NO

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/978,600

DATE: 01/28/2002

TIME: 11:29:11

Input Set : N:\Crf3\RULE60\09978600.raw

Output Set: N:\CRF3\01282002\I978600.raw

```

145      (iv) ANTI-SENSE: NO
146      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
147      ACCTAGCAGG TGTCTCCTCT ATC
149 (2) INFORMATION FOR SEQ ID NO: 5:
150      (i) SEQUENCE CHARACTERISTICS:
151          (A) LENGTH: 27 base pairs
152          (B) TYPE: nucleic acid
153          (C) STRANDEDNESS: double
154          (D) TOPOLOGY: linear
155      (ii) MOLECULE TYPE: other nucleic acid
156      (iii) HYPOTHETICAL: NO
157      (iv) ANTI-SENSE: NO
158      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
159      CAATTTTCATC ACAACAATTA TCAATAT
161 (2) INFORMATION FOR SEQ ID NO: 6:
162      (i) SEQUENCE CHARACTERISTICS:
163          (A) LENGTH: 21 base pairs
164          (B) TYPE: nucleic acid
165          (C) STRANDEDNESS: double
166          (D) TOPOLOGY: linear
167      (ii) MOLECULE TYPE: other nucleic acid
168      (iii) HYPOTHETICAL: NO
169      (iv) ANTI-SENSE: NO
170      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
171      GCCATAACCC AATACCAAAC G
173 (2) INFORMATION FOR SEQ ID NO: 7:
174      (i) SEQUENCE CHARACTERISTICS:
175          (A) LENGTH: 23 base pairs
176          (B) TYPE: nucleic acid
177          (C) STRANDEDNESS: double
178          (D) TOPOLOGY: linear
179      (ii) MOLECULE TYPE: other nucleic acid
180      (iii) HYPOTHETICAL: NO
181      (iv) ANTI-SENSE: NO
182      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
183      AATCACAGCA GTCCTACTTC TCC
185 (2) INFORMATION FOR SEQ ID NO: 8:
186      (i) SEQUENCE CHARACTERISTICS:
187          (A) LENGTH: 25 base pairs
188          (B) TYPE: nucleic acid
189          (C) STRANDEDNESS: double
190          (D) TOPOLOGY: linear
191      (ii) MOLECULE TYPE: other nucleic acid
192      (iii) HYPOTHETICAL: NO
193      (iv) ANTI-SENSE: NO
194      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
195      TCACAGCAGT CCTACTTCTC CTATC
197 (2) INFORMATION FOR SEQ ID NO: 9:
198      (i) SEQUENCE CHARACTERISTICS:

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/978,600

DATE: 01/28/2002

TIME: 11:29:11

Input Set : N:\Crf3\RULE60\09978600.raw

Output Set: N:\CRF3\01282002\I978600.raw

```

199      (A) LENGTH: 26 base pairs
200      (B) TYPE: nucleic acid
201      (C) STRANDEDNESS: double
202      (D) TOPOLOGY: linear
203      (ii) MOLECULE TYPE: other nucleic acid
204      (iii) HYPOTHETICAL: NO
205      (iv) ANTI-SENSE: NO
206      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
207      CAAAATCCAT TTCATATCA TATTCA
209 (2) INFORMATION FOR SEQ ID NO: 10:
210      (i) SEQUENCE CHARACTERISTICS:
211          (A) LENGTH: 25 base pairs
212          (B) TYPE: nucleic acid
213          (C) STRANDEDNESS: double
214          (D) TOPOLOGY: linear
215      (ii) MOLECULE TYPE: other nucleic acid
216      (iii) HYPOTHETICAL: NO
217      (iv) ANTI-SENSE: NO
218      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
219      TCATAGAAGA GCTTATCACC TTTCA
221 (2) INFORMATION FOR SEQ ID NO: 11:
222      (i) SEQUENCE CHARACTERISTICS:
223          (A) LENGTH: 24 base pairs
224          (B) TYPE: nucleic acid
225          (C) STRANDEDNESS: double
226          (D) TOPOLOGY: linear
227      (ii) MOLECULE TYPE: other nucleic acid
228      (iii) HYPOTHETICAL: NO
229      (iv) ANTI-SENSE: NO
230      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
231      AGAGCTTATC ACCTTTCATG ATCA
233 (2) INFORMATION FOR SEQ ID NO: 12:
234      (i) SEQUENCE CHARACTERISTICS:
235          (A) LENGTH: 18 base pairs
236          (B) TYPE: nucleic acid
237          (C) STRANDEDNESS: double
238          (D) TOPOLOGY: linear
239      (ii) MOLECULE TYPE: other nucleic acid
240      (iii) HYPOTHETICAL: NO
241      (iv) ANTI-SENSE: NO
242      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
243      TGCCCGCCAT CATCCTAG
245 (2) INFORMATION FOR SEQ ID NO: 13:
246      (i) SEQUENCE CHARACTERISTICS:
247          (A) LENGTH: 18 base pairs
248          (B) TYPE: nucleic acid
249          (C) STRANDEDNESS: double
250          (D) TOPOLOGY: linear
251      (ii) MOLECULE TYPE: other nucleic acid

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/978,600

DATE: 01/28/2002

TIME: 11:29:12

Input Set : N:\Crf3\RULE60\09978600.raw

Output Set: N:\CRF3\01282002\I978600.raw

L:24 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]

L:25 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]